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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/29/2001

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EXAMINER

DINH, DUC Q

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

07/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/940,801

Applicant(s)

YAMAGUCHI ET AL.

Examiner

DUC Q. DINH

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 25, 2006 has been entered. Claims 1-10 and 12-18 are pending in the Application. Claims 1, 16, 17 and 18 currently amended and being examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon, II et al. (U.S Patent No. 6,184,856), hereinafter Gordon in view Oh-e et al. (U.S Patent No. 6,392,732) of Hou et al. (U.S Patent No. 6,113,810), hereinafter Hou.

In reference to claim 1, Gordon discloses an image display device comprising:

a display substrate (2) having first side and a second side;

a back substrate (4);

an electrode (20) formed on the lower side of the display substrate (2);
a spacer(24) for forming a gap between the display substrate and the back substrate;
two kinds of particles differing in (10a, 10b) sealed between the display substrate (2) and the back substrate (4) [col. 6, lines 64-66].

a filter (30,32,34) of plural colors (R, G, B) for transmitting light of a specific wavelength, wherein the filter is formed on the second side of the (the filter elements may also be located on the front surface of the front window (2), i.e.: second side of the display substrate);

Gordon does not disclose wherein the filter is divided into plural chromatic regions and plural of achromatic, each of the achromatic regions being disposed between adjacent chromatic regions. Oh-e discloses a filter is divided into plural chromatic regions and plural of achromatic, each of the achromatic regions being disposed between adjacent chromatic regions for a display in Fig. 8.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the filter of Gordon II to have the filter is divided into plural chromatic regions and plural of achromatic, each of the achromatic regions being disposed between adjacent chromatic regions as taught by Oh-e because it would provide a display which is capable of providing a wide viewing angle and a high image quality without generating the smear phenomenon (col. 2, lines 27-29 of Oh-e)

The combination of Gordon and Oh-e does not disclose the particles are differing in charging polarity. Hou discloses in Fig. 1 the particles of a display are differing in charging polarity.

It would have been obvious for one of ordinary skill in the art at the time of the invention to replace the pigments with particles with different charging polarity in the combination of Gordon and Oh-e as taught by Hou because it would provide a display device image display device with highly contrast display images (col. 2, lines 15-20 of Hou).

In reference to claim 2, Hou discloses the two particles are white and black as claimed.

In reference to claims 3-4, Hou discloses the particles white electrophoretic particles 22 and black electrophoretic particles 24 may be formed from cross linked polymer particles using a two stage dispersion polymerization technique with and without staining with a metal oxide, respectively [col.3, lines 45-55].

In reference to claim 5, Gordon discloses in Fig. 1 the substrate and the filter are integrated.

In reference to claim 6, Gordon discloses the color filter medium can, for example, be a light-transmissive colored filter element, a colored light-reflecting panel, or the pigment suspension fluid itself can be colored and serve as the color filter medium (col.3, lines 35-40).

In reference to claim 7, Gordon discloses the filter is divided into 3 regions for red, green, and blue colors (Fig. 1).

In reference to claim 8, Gordon discloses the color filter is arranged in stripes (Fig. 1)

In reference in claim 10, Gordon discloses the color filter medium selects the color reflected by each cell. The color filter medium can, for example, be a light-transmissive colored filter element disposed across the horizontal area of the cell, either above the suspension or below the suspension on top of the light-reflecting panel. An appropriately colored pigment

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suspension fluid, a colored light-reflecting panel, a color diffuser, or a painted surface can also serve as the color filter medium (col. 8, lines 8-18).

In reference to claim 12, Gordon discloses the transparent achromatic wall 24 as claimed.

In reference to claim 13, Gordon discloses electrodes 8 and 20 as claimed.

4. Claims 14-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon and Oh-e and Hou as applied to claims 1-8 and 10-13 and further in view of Comiskey (U. S. Patent No. 6,376,828).

In reference to claims 14 and 15, the combination of Gordon, Oh-e and Hou does not disclose the irradiating means for the display. Comiskey discloses a front light for an electrophoretic display for emitting white light to the inside of the image display medium from the display substrate side of the image display medium (see Fig. 1).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to provide the light source to illuminate the display in the combination of Gordon, Oh-e and Hou as taught by Comiskey for lighting the display when ambient light decreases (col. 8, lines 15-20 of Comiskey).

In reference to claims 16-18, refer to the rejection as applied to claims 1 and 14-15. In addition, Comiskey discloses the light transmissive element 8 may comprise additional elements to enhance the versatility of the illuminated nonemissive electronic display 1. In one embodiment of the invention, shown in FIG. 1, a light polarizing film 16 (corresponding to the

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spectral means) is provided adjacent first surface 8a to increase the uniformity of light passing through the second face 8b and reaching the viewer 20. In another embodiment of the invention, a red/green/blue absorptive filter (not shown) is provided adjacent the first face 8a or second face 8b of the light transmissive element 8 to alter the wavelength of light passing through the first face 8a or second face 8b thereby creating a colored display (col. 6, line 62 – col. 7, line 6).

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon, Oh-e and Hou as applied to claims 1-8 above and further in view of Shirochi (U. S. Patent No. 5,872,654)

In reference to claim 9, the combination Gordon, Oh-e and Hou do not disclose the filter is on of the matrix mosaic type. Sherochi discloses color filters corresponding to three primary colors are placed relative to each pixel and the same color pixels are arranged having the mosaic type as claimed.

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to learn the teaching of Shirochi, i.e., color filters corresponding to three primary colors are placed relative to each pixel and the same color pixels are arranged having the mosaic pattern for providing a display device in which the diffusion for more than three pixels can be easily obtained (col. 2, lines 34-37 of Shirochi).

Response to Arguments

Applicant's arguments filed April 27, 2007 have been fully considered but they are not persuasive. Applicant argues that “the combination of Gordon, Ho, Comisky does not disclose “each of the achromatic regions being disposed between adjacent chromatic regions so as fully

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separate the chromatic regions from each other” as recited in claims 1 and 16-18. However, as discussed with Applicant’s representative, Bogdan Zinchenko, on May 30, 2007, Oh’e discloses in Fig. 1 “each of the achromatic regions being disposed on the of the color filter substrate 23 to fully separate the chromatic regions R, G and B from each other” as claimed in independent claims 1 and 16-18. Therefore, the rejection is maintained.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DUC Q. DINH** whose telephone number is **(571) 272-7686**. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, **RICHARD HJERPE** can be reached on **(571)272-7691**.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(571) 273-8300 (for Technology Center 2600 only)

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,
Arlington, Va Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 305-4700.

DUC Q DINH
Examiner
Art Unit 2629

A handwritten signature in black ink, appearing to read "Duc Q Dinh", written in a cursive style.